

ABSTRACT OF THE INVENTION

The invention is based on the discovery that certain membranes, which include side chains or molecular “brushes” having, for example, tertiary amino functional groups, can be used as highly effective filters to capture viruses/virus particles from liquids without removal of proteins. New methods based on this discovery include removing viruses from liquids such as blood or plasma, removing viruses from pharmaceuticals, concentrating and/or purifying viruses, e.g., for use in gene therapy, and producing recombinant viruses in new bioreactors. The invention also includes new methods of therapy or adjunct therapy for viral infections, in which a patient's blood or plasma is filtered through the membranes to remove viruses to reduce the viral load. The invention also includes new bioreactors and viral filters containing the membranes.

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